

# 5 The radionuclides

The radionuclides listed below can be measured with 1470 WIZARD.

ID	Nuclide	Energy (Kev)	Eff. (%)	Half-life (hours)	Cov. (%)	Low W. (Kev)	High W. (Kev)	Res (%)	Cx (%)	Cx (%)	Cx tot. (%)		
				Note 1					Note 2		Note 3		Note 4
1	I-125	29	82	1445	97			24	0	0	0		
2	Co-57	122	90	6480	92			12	0	0.02	0.002		
3	Cr-51	320	3.7	667	80			9	0.001	0.35	0.03		
4	I-129	31	65	1.49+11	96			0	0	0	0		
5	As-76	559	7	26.4	31			0.08	1.8	0.24			
6	Au-195	99	75	4390	95			0	0	0			
7	Au-198	412	11	64.7	47			0.04	0.8	0.11			
8	Ba-133	356	16	6.30E+4	54			0.002	0.5	0.05			
9	Ba-139	166	76	1.38	87			0.1	0.01	0.02			
10	Br-77	245	11	57	74			0.2	0.02	0.04			
11	Ca-47	1297	38	109		1000	1500						
12	Cd-109	22	71	11136		16	32						
13	Ce-141	145	56	780		125	167						
14	Co-58	810	23	1711		180	950		0.16	4.1	0.53		
15	Co-60	1332	14	4.62E+4		1060	1450						
16	Cs-134	795		18063		500	890						
17	Cs-137	662	26	2.63E+5	25			8	0.09	3.6	0.41		
18	Er-171	308	13	7.52	62			9	0.3	0.03	0.06		
19	F-18	511	28	1.83		200	1500	9	0.06	1.5	0.19		
20	Fe-59	1292	14	1071		1020	1400						
21	Ga-67	185	70	78	85			10	0.15	0.015	0.03		
22	Gd-153	147	100	5808		26	167						
23	Hg-203	279	31	1126	68			10	0.3	0.03			
24	I-123	159	80	13.3	88			11	0.1	0.01	0.02		
25	I-131	360	15	193	54			9	0.03	0.7	0.09		
26	In-111	245	52	67.7	74			10	0.3	0.02			
27	In-114m	190	30	1188	88	166	210						
28	K-42	1525	7	12.4		1200	1800						
29	K-43	373	14	22.6	52			9	0.02	0.5	0.06		
30	Na-22	511	51	2.27E+4	37			9	0.14	3.7	0.47		
31	Nb-95	766	15	841		686	846						
32	Pb-203	279	31	52.1	68			10	0.3	0.03			
33	Rb-86	1077	6	448		800	1300						
34	Ru-103	497	15	944		400	600						
35	Sb-125	428	10	2.37E+4	45			0.04	0.9	0.12			
36	Sc-46	1098	10	2011.2		990	1200						
37	Sc-47	160	80	82.1	88			8	0.1	0.01			
38	Se-75	265	31	2880	75			10					
39	Sm-153	103	86	47	93			14	0				
40	Sn-113	392	22	2760		350	430						
41	Sr-85	514	8	1530	36			9	0.06	1.5			
42	Sr-87m	388	12	2.8	50			9	0.03	0.6	0.06		
43	Tc-99m	140	86	6	90			12	0.07	0.01	0.08		
44	Open					0	1024						
46	Ge-68	511	28	6504		20	1800		0.06	1.5	0.19		
47	C-11	511		3.41E-1		20	1800		0.06	1.5	0.19		
48	O-15	511		3.40E-2		20	1800		0.06	1.5	0.19		
49	N-13	511		1.655E-1		20	1800						
50	Tl-201	70		73.06		60	90						

Note 1 Eff = CPM/DPM \*100 %, typical values, open window.  
Efficiency includes transition probability

Note 2 Crosstalk from conveyor

Note 3 Crosstalk from detector (uncorrected)

Note 4 Total, corrected crosstalk from single sample